

Please enter the amended paragraph at Page 9, lines 7-14 as follows:

An embodiment of the scaled combiner 406' is illustrated in Figure 5.

Compared to Figure 3, the traffic despread values are scaled prior to combining. Scalers 502a-502c scale the complex traffic despread values by a real number multiplication. Scale factors are estimated in scale factors estimator 504, which uses pilot and traffic despread values to form scale factors. Multipliers 302a-302c are used to multiply the scaled traffic despread values and the channel estimates. An alternative can apply the scale factors to the channel estimates instead of the traffic despread values, prior to combining.

In the Claims:

Please enter amended Claim 1 as follows:

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1. (Amended) A method of processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels, comprising the steps of:

- receiving data samples from the plurality of traffic channels and the plurality of pilot channels;
- correlating the received data samples to spreading codes to produce pilot despread values and traffic despread values;
- forming scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;
- estimating channel responses using the pilot despread values to produce channel coefficient estimates;
- combining the traffic despread values to obtain detection statistics that correspond to information symbols, using the channel coefficient estimates; and
- scaling the traffic despread values and/or the pilot despread values by the scale factors such that the step of combining obtains detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels.

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Please cancel Claim 3.

Please enter amended Claim 6 as follows:

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6. (Amended) A method of processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels, comprising the steps of:

- receiving data samples from the plurality of traffic channels and the plurality of pilot channels;
- correlating the received data samples to spreading codes to produce pilot despread values and traffic despread values;
- forming scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;
- estimating channel responses using the pilot despread values to produce channel coefficient estimates;
- combining the traffic despread values to obtain detection statistics that correspond to information symbols, using the channel coefficient estimates; and
- scaling at least one of the traffic despread values, the channel estimates and the pilot despread values by the scale factors such that the step of combining obtains detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

wherein the step of forming scale factors comprises the steps of:

- forming an error signal using the pilot channel despread values and the traffic channel despread values; and
- computing a scale factor based on the error signal.

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Please cancel Claims 10-11.

Please enter amended Claim 12 as follows:

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12. (Amended) A system for processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels, the system comprising:

- means for receiving data samples from the plurality of traffic channels and the plurality of pilot channels;
- means for correlating the received data samples to spreading codes to produce pilot despread values and traffic despread values;
- means for forming scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

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means for estimating channel responses using the pilot despread values to produce channel coefficient estimates;

means for combining the traffic despread values to obtain detection statistics that correspond to information symbols, using the channel coefficient estimates; and

means for scaling the traffic despread values and/or the pilot despread values by the scale factors such that the means for combining obtains detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels.

Please cancel Claim 14.

Please enter amended Claim 16 as follows:

16. (Amended) A system for processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels, the system comprising:

means for receiving data samples from the plurality of traffic channels and the plurality of pilot channels;

means for correlating the received data samples to spreading codes to produce pilot despread values and traffic despread values;

means for forming scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

means for estimating channel responses using the pilot despread values to produce channel coefficient estimates;

means for combining the traffic despread values to obtain detection statistics that correspond to information symbols, using the channel coefficient estimates; and

means for scaling at least one of the traffic despread values, the channel estimates and the pilot despread values by the scale factors such that the means for combining obtains detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

wherein the means for forming scale factors comprises:

means for estimating power on a pilot channel;

means for estimating power on a traffic channel; and

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means for determining scale factors based upon the estimated powers on the pilot channel and the traffic channel.

Please cancel Claims 21-22.

Please enter amended Claim 23 as follows:

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23. (Amended) A system for processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels, the system comprising:
a receiver that receives data samples from the plurality of traffic channels and the plurality of pilot channels;
a correlator that correlates the received data samples to spreading codes to produce pilot despread values and traffic despread values;
a scale factor estimator that estimates scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;
a channel coefficient estimator that estimates channel responses using the pilot despread values to produce channel coefficient estimates;
a combiner that combines the traffic despread values to obtain detection statistics that correspond to information symbols, using the channel coefficient estimates; and
a scaler that scales the traffic despread values and/or the pilot despread values by the scale factors such that the combiner obtains detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels.

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Please cancel Claim 25.

Please enter amended Claim 28 as follows:

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28. (Amended) A system for processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels, the system comprising:
a receiver that receives data samples from the plurality of traffic channels and the plurality of pilot channels;

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a correlator that correlates the received data samples to spreading codes to produce pilot despread values and traffic despread values;

a scale factor estimator that estimates scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

a channel coefficient estimator that estimates channel responses using the pilot despread values to produce channel coefficient estimates;

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a combiner that combines the traffic despread values to obtain detection statistics that correspond to information symbols, using the channel coefficient estimates; and

a scaler that scales at least one of the traffic despread values, the channel estimates and the pilot despread values by the scale factors such that the combiner obtains detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels; and

an error signal generator that is responsive to the pilot channel despread values and the traffic channel despread values.

Please cancel Claims 32-33.

Please add new Claims 34-39 as follows:

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34. A method of processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels, comprising the steps of:

receiving data samples from the plurality of traffic channels and the plurality of pilot channels;

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correlating the received data samples to spreading codes to produce pilot despread values and traffic despread values;

forming scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

estimating channel responses using the pilot despread values to produce channel coefficient estimates;

combining the traffic despread values to obtain detection statistics that correspond to information symbols, using the channel coefficient estimates; and

scaling at least one of the traffic despread values, the channel estimates and the pilot despread values by the scale factors such that the step of combining obtains detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

wherein the step of forming scale factors comprises the steps of:

- estimating power on a pilot channel;
- estimating power on a traffic channel;
- dividing the estimated power on a traffic channel by the estimated power on the pilot channel to produce a power ratio; and
- obtaining a square root of the power ratio to produce the scale factor.

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35. A method according to Claim 34 wherein the step of estimating power on a traffic channel comprises the step of estimating an equivalent full rate power on the traffic channel.

36. A system for processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels, the system comprising:

- means for receiving data samples from the plurality of traffic channels and the plurality of pilot channels;
- means for correlating the received data samples to spreading codes to produce pilot despread values and traffic despread values;
- means for forming scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;
- means for estimating channel responses using the pilot despread values to produce channel coefficient estimates;
- means for combining the traffic despread values to obtain detection statistics that correspond to information symbols, using the channel coefficient estimates; and
- means for scaling at least one of the traffic despread values, the channel estimates and the pilot despread values by the scale factors such that the means for combining obtains detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels;

wherein the means for forming scale factors comprises:

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means for estimating power on a pilot channel;
means for estimating power on a traffic channel;
means for dividing the estimated power on a traffic channel by the
estimated power on the pilot channel to produce a power ratio; and
means for obtaining a square root of the power ratio to produce the
scale factor.

37. A system according to Claim 36 wherein the means for estimating
power on a traffic channel comprises means for estimating an equivalent full rate
power on the traffic channel.

38. A system for processing spread spectrum signals from a plurality of
traffic channels and a plurality of pilot channels, the system comprising:
a receiver that receives data samples from the plurality of traffic channels and
the plurality of pilot channels;
a correlator that correlates the received data samples to spreading codes to
produce pilot despread values and traffic despread values;
a scale factor estimator that estimates scale factors corresponding to the
relative strengths of the plurality of traffic channels and the plurality of pilot channels;
a channel coefficient estimator that estimates channel responses using the pilot
despread values to produce channel coefficient estimates;
a combiner that combines the traffic despread values to obtain detection
statistics that correspond to information symbols, using the channel coefficient
estimates; and
a scaler that scales at least one of the traffic despread values, the channel
estimates and the pilot despread values by the scale factors such that the combiner
obtains detection statistics that correspond to the relative strengths of the plurality of
traffic channels and the plurality of pilot channels;
wherein the scale factor estimator comprises:
a pilot channel power estimator;
a traffic channel power estimator;

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a divider that is responsive to the pilot channel power estimator and to the traffic channel power estimator; and
a square root calculator that is responsive to the divider.

39. A system according to Claim 37 wherein the traffic channel power estimator comprises an equivalent full rate power traffic channel estimator.

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